State of global temperatures in 2012

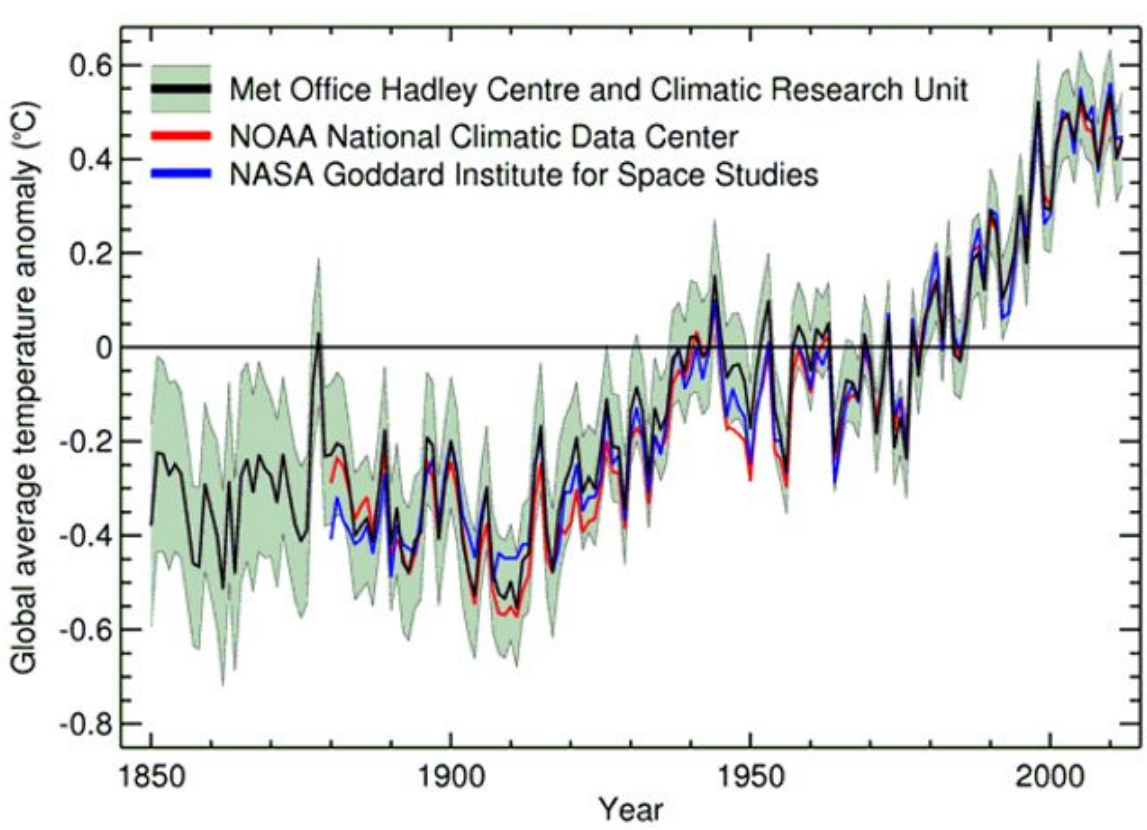
28 November 2012 — This year is on course to be the ninth warmest on record, according to the World Meteorological Organization (WMO).

Using information to October from three leading global temperature datasets, including HadCRUT4 compiled by the Met Office and the University of East Anglia, the WMO say the current 2012 global average temperature is 14.45 °C. This is 0.45 ± 0.10 °C above the 1961-1990 average.

Taking into account the range of uncertainty in observing global surface temperature, scientists from the Met Office suggest that 2012 is very likely to be between the 4th and 14th warmest year in a record dating back to 1850.

Due to a La Niña through the first part of the year, 2012 is shaping up to be cooler than the average for the past decade.

HadCRUT4 includes up-to-date data available from land stations, new data from higher-latitude stations giving better coverage of Arctic climate, and improved and more extensive sea surface temperature data.



Global near-surface temperatures from 1850 to 2012 from Met Office Hadley Centre/Climatic Research Unit HadCRUT4, NASA GISS and NOAA NCDC

Dr. Peter Stott, Head of Climate Monitoring and Attribution at the Met Office, said: "Although the first decade of the 21st century was the warmest on record, warming has not been as rapid since 2000 as over the longer period since the 1970s.

"This variability in global temperatures is not unusual, with several periods lasting a decade or more with little or no warming since the instrumental record began. We are investigating why the temperature rise at the surface has slowed in recent years, including how ocean heat content changes and the effects of aerosols from atmospheric pollution may have influenced global climate."

Final figures for the whole of 2012 will be available in March 2013.

Notes to editors:

- The 1961-90 global average mean temperature is 14.0 °C.
- Interannual variations of global surface temperature are strongly affected by the warming influences of El Niño and the cooling influences of La Niña in the Pacific Ocean. These are quite small when compared to the total global warming since 1900 of about 0.8 °C but nevertheless typically reach about +/- 0.10 °C, and can strongly influence individual years.
- The table provides the global mean temperature anomalies for the past 20 years for the three main datasets and the average of the three:

Year	HadCRUT4	NOAA NCDC	NASA GISS	WMO Average
2012	0.44±0.10	0.45	0.44	0.45
2011	0.40±0.09	0.41	0.44	0.42
2010	0.54±0.09	0.53	0.56	0.54
2009	0.49±0.09	0.47	0.5	0.48
2008	0.38±0.09	0.38	0.37	0.38
2007	0.48±0.09	0.46	0.52	0.49
2006	0.49±0.09	0.47	0.48	0.48
2005	0.53±0.09	0.52	0.55	0.54
2004	0.44±0.09	0.45	0.41	0.43
2003	0.50±0.09	0.49	0.49	0.49
2002	0.49±0.09	0.49	0.5	0.49
2001	0.43±0.09	0.42	0.42	0.43
2000	0.29±0.09	0.3	0.28	0.29
1999	0.30±0.09	0.33	0.26	0.3
1998	0.52±0.09	0.5	0.51	0.51
1997	0.39±0.09	0.39	0.34	0.37
1996	0.18±0.09	0.19	0.23	0.2
1995	0.32±0.09	0.32	0.32	0.32
1994	0.20±0.09	0.2	0.17	0.19
1993	0.14±0.09	0.14	0.07	0.12

* Anomaly: °C above long-term average.

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